METHOD AND DEVICE FOR QUALITY CONTROL OF THE JOINT ON SHEETS OR STRIPS BUTT-WELDED BY MEANS OF A LASER

Patent number: DE19957163

Publication date: 2001-08-09

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Classification:

- international: ***B23K26/03; G05B19/418;*** **B23K26/02; G05B19/418;** (IPC1-7): B23K26/03; G05B13/02; G06N3/02

- european: B23K26/03; G05B19/418Q

Application number: DE19991057163 19991127

Priority number(s): DE19991057163 19991127

Also published as:

WO0139919 (A3)
WO0139919 (A2)
CA2390873 (A1)

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Abstract not available for DE19957163

Abstract of corresponding document: **WO0139919**

The invention relates to a method for the quality control of the joint on sheets or strips butt-welded by laser, on which a number of sensor measurements are taken, by at least two sensors arranged around the welded region. The sensor data is fed as input parameters to a combining and correlating measured-data processor for quality evaluation of the welded joint. In order to achieve a real-time quality control of the welded joint, which permits an analysis of the weld result which is true to the actual result, the stored data is fed as input parameters to at least one trainable, artificial neuronal network with an essentially hierarchical structure, which comprises at least two essentially independent artificial neuronal networks. Furthermore, the first artificial neuronal network comprises at least two artificial neuronal networks. The first artificial neuronal network is fed the results from a data pre-processing, as input parameters and the second artificial neuronal partial network is fed the results from the first artificial neuronal partial network, as input parameters and the results from the at least one artificial neuronal network are used for quality control.